

Project Report(UnderRoof)

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1.Introduction to BP:

Product name: UnderRoof(NeecheyRoof).

Introduction: Building room-like structures on top of roof to provide an isolated environment like feeling for children from small houses. Which might improve their interest in studies. And children tend to think more when the environment is silent and peaceful.

UseCases:

1. Students who can't concentrate on their studies due to their home environment.
2. People who are preparing for competitive exams.
3. Can also be used as an Out house/Guest house by combining two customized UnderRoofs.

Nature of business: A social entrepreneurship project mainly focused to help children from poor families get an isolated environment on their roofs, so that they can improve their focus on their interests.

Statement of Financing:

1. Co-founders will arrange 30% money and 2 investors will arrange 70% money. We will raise around 40 crores.
2. First year we will not have much expenditure but at the end of the 3rd year we will plan to set up a manufacturing plant.
3. We also use less human resources as we plan to sell it online directly and our marketing strategies also don't require much human resources.

Team & Specific skill sets:

yaadava_kishore: development and future directions

Ayush Ojha: Financial plans

Himanshu Singh: Managing team

2.Pain Points:

Unique Selling Point(USP): An isolated environment for studying peacefully at a budget.

Our product serves as an additional room which just serves the purpose. So it should be quite durable, stable and also cheap.

Also some additional features make it more attractive and increase its usability. They are Cooling solutions and IoT connectivity.

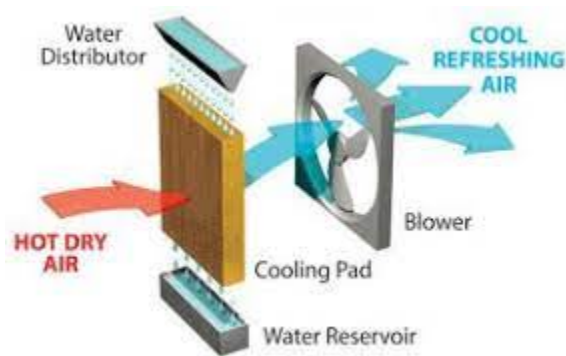
Durability: Considering this, we are bringing the latest technologies into the construction of our product.

For walls and roofs we are using the PUF sheets, which is a quite revolutionary invention. These are made by sandwiching Polyurethane foam between two metal sheets. PolyUrethaneFoam is an insulator which doesn't conduct heat at cost. Using this material also maintains the room at room temperature inside.

Stability: First we will build a hard metal frame for the house then we cover it with the puf panels. The Puf panel itself is very sturdy that not only acts as an insulator but also very strong indeed, Which gives stability to the UnderRoof.

Cheap: When compared to cement constructions this requires less material and also less labour. It is also fully detachable so it can be moved and used for other needs and wherever they want.

Ventilation and Cooling: Since our idea was to bundle the whole package at a very low cost, we have searched for other cooling solutions apart from conventional air conditioners. We have found the EcoCooler, which can be installed to our product. This EcoCooler can also be customized to purify the air around. Less maintenance and cheap price.



App for IoT(SURs) + online shopping:

1. UnderRoof, displays a QR code which has to be scanned by the app inside the user's mobile phone.
2. Which then takes to the payment page and the user chooses a plan and pays the charged amount based on the plan he had chosen.
3. Now the doors can be opened or closed from the user's mobile phone for a particular time based on the plan.
4. Pre bookings.
5. Feedback and promotion.
6. Online shopping for product purchase.

Bathrooms:

- 1 Waterless Toilets : <https://youtu.be/k1rSuxbd9bE>
- 2 Traditional Toilets built with modern low cost materials: <https://www.wockhardtoundation.org/pronto-toilet>
- 3 Composting Toilets: https://en.wikipedia.org/wiki/Composting_toilet
- 4 EcoTrapIn: <http://tapu.co.in/products/ecotrapin-plus/>

Why should customers buy our product?

The learning environment should be silent and peaceful. But in small house families, children will get easily distracted from their concentration on studies because of the disturbance around them. If we can provide them with a silent and peaceful environment they can concentrate on their interests.

Our product addresses two issues:

- 1 It provides an isolated and low cost space above their roofs where children can study peacefully.
- 2 Allows the elders who worked all day long to watch Television freely, or speak loud without any guilt feeling of disturbing their children.

Compare: Currently there isn't any rival solution to this problem.

3.Product overview:

Fully Furnitured Mini Study Workstation setup.

Motivation: Children from small houses can't enjoy the isolated environment for studies. We can provide an isolated environment(UnderRoof) for low-cost on their roofs.

Idea: Building a completely detachable and customizable, smart furniture included house on a budget that can stay on roof. Using modern materials that are durable which also don't transmit heat and cold so easily and water resistant.

Customizable: Add-ons are simple. We can include special types of furniture/additional features for different purposes for different age groups. Eg: Solar-panel featured top roof(which can add solar power and also reduce the top floor product cost) or usage of premium materials.

Cost: Around 30k + EMI availability + free Data plans for some period of time.

Solutions to targeted problems:

a)(**UnderRoofs(URs)**)Can help children from small houses focus much on studies(Main Aim).

1. Can bring interest towards studies in children.
2. They can also solve the posture issues.

b)(**UnderRoofs(URs)**)Can be used on top of apartment(rich families) roofs. So they can get a feel of fresh air and also children can enjoy their extra time away from video games(modern scrap).

Once we have become successful and gain experience, then we will focus on other markets with similar and innovative products.

c)(**WunderRoofs(WURs)**)They can also be included in the rooms which can save much space and can give a feel of workstation setup.(relatively cheaper cost). If two siblings share a room then they can install two wunderoofs.

d)(**Standalone UnderRoofs(SURs)**)Can be implemented as low-cost(cheap) stayings(rooms) in tourism places. Online payment to access and pre bookings.

1. along roadsides(pay and sleep)
2. along the shores of beaches(slightly away from rushy areas)(pay and use for staying(night or day))
3. In famous tourist places(ooty,goa etc..)

Add-ons: (Solar, Toilet, Mini cooling solutions)

1. Solar Panel on top
2. Air conditioning
3. IoT connectivity:
 - a. URs: door locking + Fan + Lights control
 - b. SURs: door access + Fan + Lights control

Building components: Puf panels, furniture(cot + mattress +chair +table), IoT components, Toilets, Eco-Cooler .

4.Bussiness Model:

We will make reasonably less profit on UnderRoofs and we will make most of the profit from SUR models and co-related businesses related to the SUR models. SURs is a one time investment and all year long profits with relatively very less establishment and maintenance costs. Also the construction times are very fast.

UPI / cash on delivery/ EMI

a)Production plan: We will not produce anything, as the initial plant setup costs are very high, also we don't have any experience in those fields. We will buy the materials from already existing producers.

Suppliers:

For PUF panels,

Aplhapeb: <https://www.alfapebltd.com/>

We will order for our custom puf panels(20mm).

For beds, Ecocoolers also we order from third party businesses.

we will only design. Then we collect all the materials and pack them to the end user. End users need to build the product from scratch with bare minimal tools(and it is very simple).

b)Operations plan: Product will be sold online as a whole package through our online store. Parts of the product will be shipped from industries to our warehouses. In the warehouse, we will collect them and store them, further ship them to the end user. We keep track of the

products shipped and maintain the new stock as per the demand of orders.

Users place the online order in our online store. As soon as the order is placed, the product will leave our warehouse and be on the way to the user's door. We will make use of third party delivery services as making our own delivery system is not so economical for such a small business.

Online Store: we will make use of SEO in our website, so that the browsers will show us first when a relevant search comes. We will constantly take feedback from the user and suggestions from other people who want to buy our product.

c)Marketing plan:

Pricing(UnderRoof): Around 30k for base variant + 500 shipping, EMI availability.

construction material(7ft*5ft*7ft = L*W*H):

Total area: 210 sq ft.

Cost/sqft: RS.80/90/100/110

Total cost: RS.16,800/18,900/21,000/23,100

Furniture: (6ft*3ft)Iron cot + PUfoam mattress + Tablemate + Chair

Iron cot + mattress: 5k

Tablemate + chair : 2k

Fan + light : 3.5k

In total: {29999/-(1499/- profit included)}

1 18k for construction material

2 5k for beddings, 1k for Table, 1k for chair

3 3.5k for wiring, lights, Eco-Cooler

The price of the basic model wonderRoof(WURs) will be lesser than UnderRoof and price of Standalone UnderRoof is higher than UnderRoof.

Distribution: We will have our own website through which users can place the order, where they can choose different add-ons to customize

it. We will make it completely online and no middleman between us and end users.

Promotion: First we will use today's promotion strategies.

1. Youtube channel (Education towards our product)
 - a. In this we educate the people what our product is and to whom it is useful.
 - b. Also we will ask the users to send the feedback of our product in a video form to telecast in social media platforms.
2. Social media promotions(Instagram,Facebook etc) through influencers.
3. Television Advertisements (once if our product is quite successful)
4. Google Ads

Product forecast and Control: In our warehouses, We will keep the stock of our product as per the demand/requirement. We will monitor our sales and take decisions on the production of the product. Initially we will maintain 500 units in our warehouse, there may not be many orders after initial launch, so we will barely increase our production units. But after we get momentum in sales we will increase the production units based on the sales reports and data. We will continuously take feedback from the sales reports to increase or decrease the production.

Also there may be seasons(starting of academic year) when we can be hit by more orders. We will increase our production during that time.

d)Organization plan:

Form of ownership: We will take help from investors who will be our partners in our business. Investors will invest 70% of the total funding needed. And we offer them about 50% partnership in our company, of which 35% is for investor_1 and 15% for investor_2. As co-founders we kept the rest of the 50% percent for ourselves, of which 20% is for yaadava kishore, 15% percent is for Ayush and the other 15% is for Himanshu.

Management team and background: The management team will recruit the people and collect the details from both the marketing team and warehouse management teams.

Roles of people: We three people will be co-founders. One person will be managing the Financial needs, other will manage all the employees under us and other person will focus on the future developments of the company (searching for new technologies, Analysing the competition and taking steps to overcome the competition)

Hiring plans:

1. We will hire students in btech colleges for promotion purposes in social media.
 - a. They will create content and post it on social media (youtube, twitter, facebook etc..).
 - b. They also refer to other people in their locality and to their friends.
2. Initially we will only plan to set up a marketing team and management team.
 - a. Marketing team: These people talk to partner manufacturers and monitor the sales and collect and analyze the feedback from users. These people will also monitor the students we hire for promotion in social media.
 - b. Management team: These people have the responsibility of managing the warehouse and employees in it. Also these people will help the co-founders as well.

5)

Market Opportunity: Our product has market opportunity in Underdeveloped to developing countries as our product can be used in various countries by different requirements. If we focus on India which has rich and poor class. As per reports the average size for an urban house = 504 sq ft and for rural = 494 sq ft. [33% of Indians live in less space than US prisoners - Times Of India \(archive.org\)](#) If some student is preparing for competitive exam, one reason parents are forced to

send their child to some competition hub is because their house does not have an environment to study and they pay hefty rent charges every month from their meagre savings. This one-time product which generally equals rent cost for 4-5 months only solves all the problems for them. So for this product for a country like India where most of the population has this problem, there is huge market potential. But we are not keeping much profit for this product and our main profit will come from our SUR model which again has huge market potential as many people have the passion of spending vacations with nature but since they live in cities they could not survive in nature in normal tents and they want luxury also.

Also constructing permanent tent houses in natural scenery will be depreciative to nature and our products are fully detachable and can be transported from one place to another.

So the opportunity for SUR is great in attachment with the tourism sector and their integration will create great profits.

Analysis of competitors:

1. In URs there is no such competition as it is a first of its kind product. But the companies which are supplying our building material also produce big industrial manufactured house-like structures. They might copy our idea and launch the same product as ours.
2. In SUR though the product is different but we may face competition from luxurious hotels which are involved for a long time in their industry. They have the edge of experience and luxury of providing well-cooked food also while our portability is our biggest strength.

Future outlook and trends: In future if we succeed in this business, then we try to launch similar innovative products targeting other problems. One such idea is Standalone UnderRoofs (mentioned in the Product Overview).

Market Segmentation: Our product mainly focuses on one issue and that is to provide a fully furnished isolated environment for students at low costs for small house families. But our product can also be targeted

on other financially better families also through our other products like WunderRoof(mentioned in the Product Overview). We can divide based on usage

1. Students in small houses
2. Kids from rich apartments
3. Siblings sharing combined room
4. Low budget tourists

Current Traction: Before we are ready to take orders, we have to set up a warehouse, website to take orders, partnerships with third party services like delivery system, building material and furniture manufacturers and hire early employees.

1. So first we will build a warehouse to collect the parts of our product and pack as a whole product.
2. Later we have to build a website to take orders and feedback from users.
3. Also we have to set up partnerships with our sub product manufacturers.

Evaluation of weaknesses: Since the project is new, we constantly try to stay in touch with the customers. Collect their valuable feedback and try to evaluate ourselves and our product to constantly improve it and provide better solutions and services.

New Technologies: We will constantly adapt to the new technology trends. We always try to find new materials that are more efficient than the ones that are in use today. For example, we are using chairs as an additional asset in our UnderRoof, but in future we will introduce smart furniture beds where chairs are also a part of the bed. This way we can also reduce the cost and also be up to date with the fast growing world.

Contingency plans: There might be a case when our product is selling more, than the third party companies may try to copy our plan and replicate it. That third party company may be the company which is currently producing our product. So first we will file a patent application for our product and we will also try to set up an industry or plant which is capable of producing all parts of our product.

6)Financials:

Current: In initial months(say 1-5 months) we are targeting around 1500 unit sales. So the profit will be around 25 lakhs each month on average. We expect the sales to reach around 10,000 monthly sales then we will set up a plant which costs 20 crore money and salary expenditures also raise

We will sell each product for 29,999 rupees , from which we make 1500 profit.

First five months(Average): on average 1500 units

Sl.No	Type of investment	Average Cost/month
1	Product manufacturing cost	4,27,50,000
2	Salary burden	12 lakhs
3	Plant setup /maintenance	----
4	Advertisements	1 lakhs(Google Ads)

Total Profit is 22,50,000 from selling.

Next(5-12)months(Average): on average 3000 units

Sl.No	Type of investment	Average Cost/month
1	Product manufacturing cost	85,500,000
2	Salary burden	12 lakhs
3	Plant setup /maintenance	----
4	Advertisements	1.5 lakhs(Google Ads)

Total profit is 45,00,000 from selling.

Projections for next 3-years: {c stands for crore(10^7 rupees)}

sl.no	Type	1st year	2nd year	3rd year
1	Product overhead cost	9c	11c	18c
2	Salaries	1.5c	1.7	1.9

3	Plant setup + maintenance + salaries	--	--	2c(setup)+ 2c(salaries + maintenance)
4	Advertisements	15 lakhs	18 lakhs	25 lakhs
5	Total profit(by selling product)	2500 units/m 4.5 c/year	3500 units/m 5.25 c/year	6,000 units/m 9c/year
6	Total turnover	2.9c	3.3c	4.5c

Total turnover = Total profit - running investment (salaries of advertisement maintenance)

7)Funding Needs:

Once we surpass our 8,000 monthly sales, we will set up our own plant which can produce all our sub parts of the product. The total funding we would like to raise is around 30 crores.

Initially we will not spend the money for setting up or setting up our own plant to produce all the subparts of the product, which might be risky. So we will first take help from third party manufacturers with whom we will make partnerships to make our product sub parts. So this way we will make our initial expenditure less.

Initial product cost(1500 units)+early employee salaries	7 crore
Land + building	10 crore
Machinery	10 crore

Early employees: 20 members(avg 30 thousand) =6 lakhs

Co-founders: 3 members (each 2 lakhs)

Initial product purchase costs, $1500 \text{ units} \times 28500 = 4,27,50,000$

Warehouse construction: 2 crore

Website: 10 lakhs

Standalone UnderRoofs(SURs): 10 crores {Once we succeed and gain experience}

So we are planning to raise a fund of almost 40 crores.

Co founders will invest 30%(through bank loans) and angel investors will invest 70% in our venture. And we will also use some government allowances.We come under small MSME.

The investment we have planned is for our initial setup expenditures and also for our future plant setup. For the first month we will make use of the money from our investment, we will give orders for sub-parts of our product to our partner industries. Which costs almost 4.5 crores and all early employees' salaries burden is 12 lakhs. And warehouse construction cost is 2 crore.Website making costs are around 10 lakhs.

We initially produced 1500 units. After selling it we can make Rs.22,50,000 profit. As our sales grow each month then we will get more profits. And we plan to reach 10,000 units at the end of 2 years.

8)Current Equity Structure: Co-founders invest 30% money and angel investors invest remaining 70 % money.

Equity distribution:

Co-founders: 50%

- Yaadava kishore: 20%
- AyushOjha: 15%
- Himanshu Singh: 15%

Angel Investors: 50%

- Investor__1: 35%
- Investor__2:15%

9)Possible Exit Options:

Exit option1(If all our funding raised is drowned): Most of the cost is our raw material which we generally import from 3 rd parties and our other services are also 3rd party services. So we can easily sell off excess materials we have brought back at market rates. We will sell the plant we established

Exit option2(Any big company interests in merging): If any big company like Wipro(who spends a lot on social welfare) would like to buy our company, then analyzing the profits and losses we will sell it happily.

LOGOs

UNDER
ROOF

